

TRIODE
POWER AMPLIFIER

Western Electric

DESCRIPTION

The 300B is a filamentary type triode designed for use as an audio-frequency power amplifier.

CHARACTERISTICS

Filament Voltage	5.0 volts
Plate Current	60 milliamperes
Power Output	8 watts
	$E_b = 350 \text{ volts;}$	
	$E_c = -74 \text{ volts}$	

GENERAL CHARACTERISTICS**ELECTRICAL DATA**

Filament Voltage, A-C or D-C	5.0 volts
Filament Current	12 amperes
Direct Interelectrode Capacitances	
Grid to Plate	15 uuf
Input	8.5 uuf
Output	4.1 uuf

MECHANICAL DATA

Cathode	Coated Filament
Base	Medium 4-pin with skew bayonet pin
Mounting Position	Preferably vertical; if horizontal, pins #1 and #2 must be in same vertical plane

Dimensions and pin connections shown in outline drawing on Page 6

MAXIMUM RATINGS, Design-Center Values

Plate Voltage	400 volts
Plate Current	100 milliamperes
Plate Dissipation	36 watts

Maximum Grid Circuit Resistance for

Fixed Bias	0.05 megohm
Self Bias	0.25 megohm

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**SINGLE TUBE AMPLIFIER — CLASS A₁**

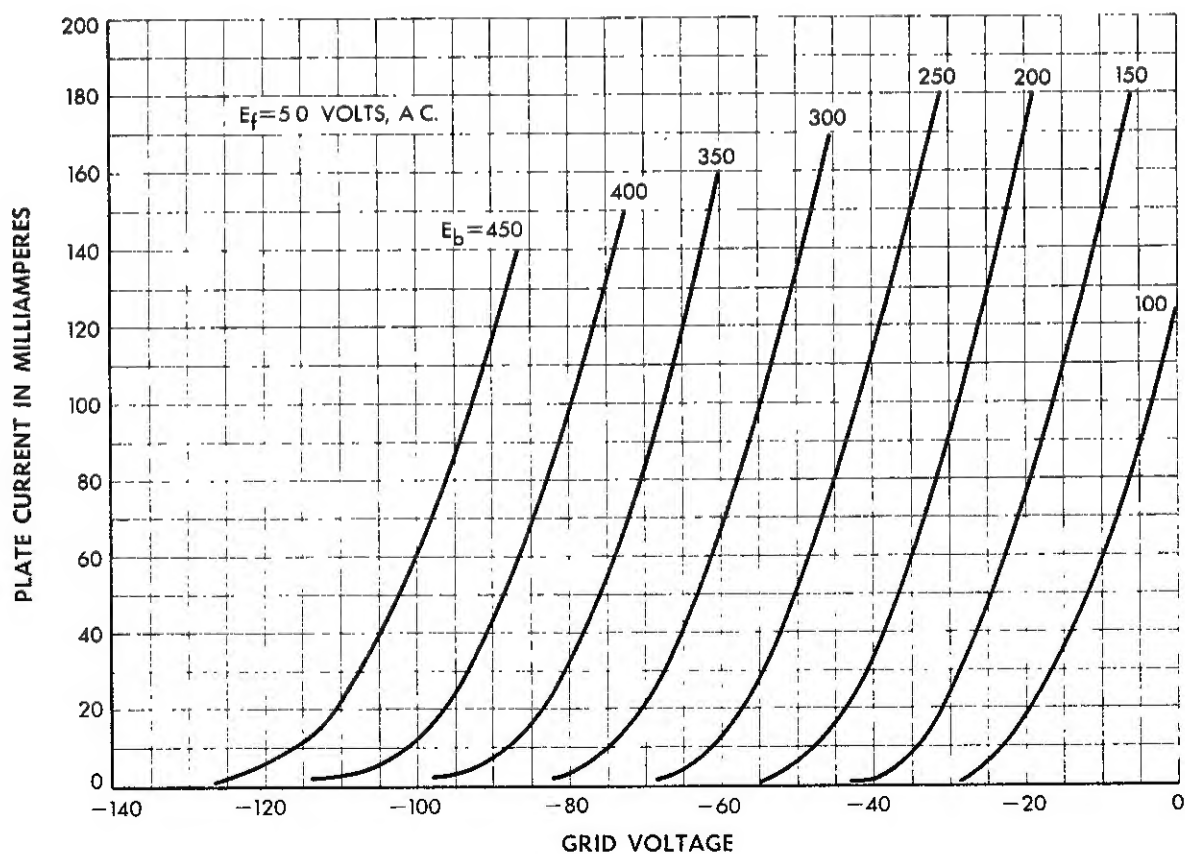
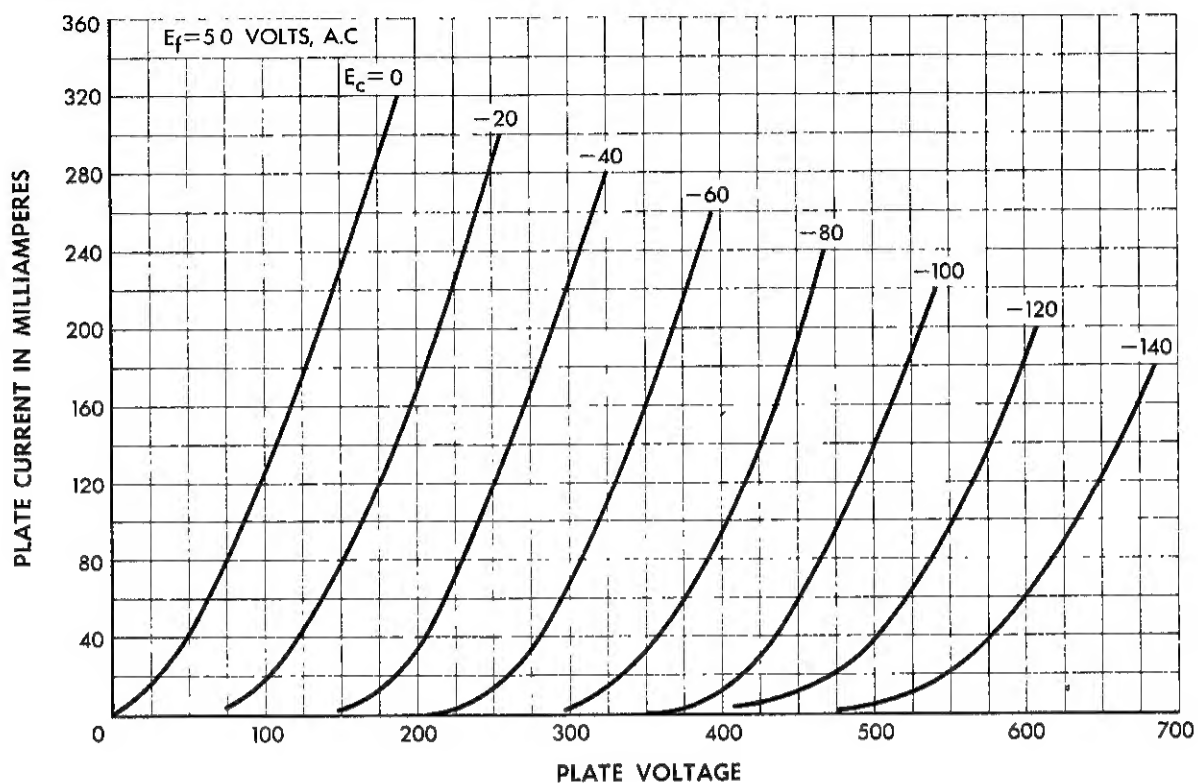
Filament Voltage, A-C	5.0	5.0 volts
Plate Voltage	300	350 volts
Grid Voltage	-61	-74 volts
Peak A-F Signal Voltage	61	74 volts
Zero Signal Plate Current	62	60 milliamperes
Maximum Signal Plate Current	74	77 milliamperes
Transconductance	5300	5000 micromhos
Plate Resistance	740	790 ohms
Load Resistance	3000	4000 ohms
Amplification Factor	3.9	3.9
Maximum Signal Power Output	6	7 watts
Total Harmonic Distortion	5	5 per cent

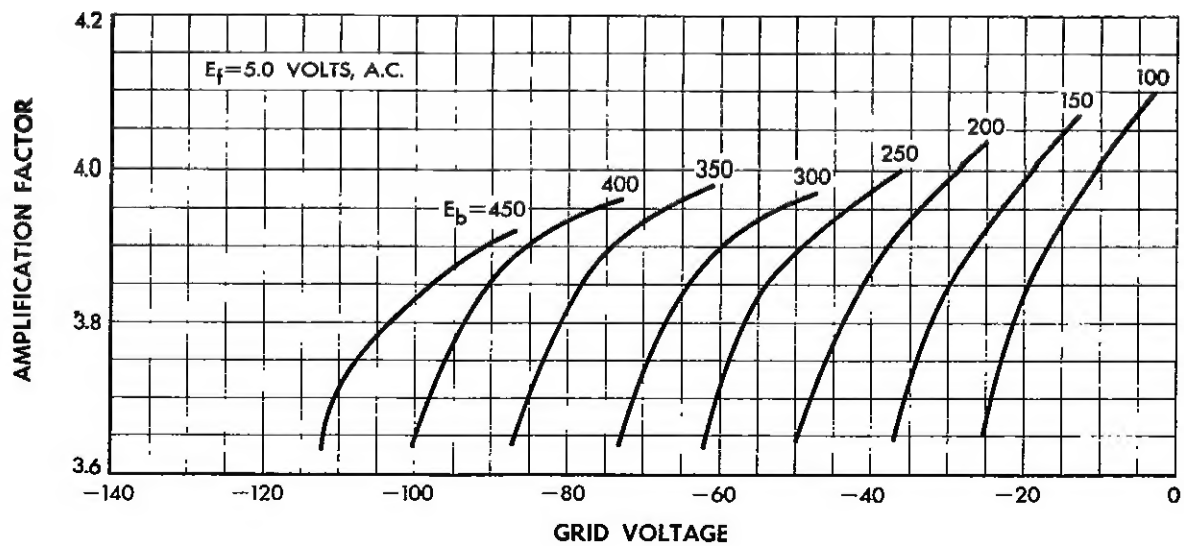
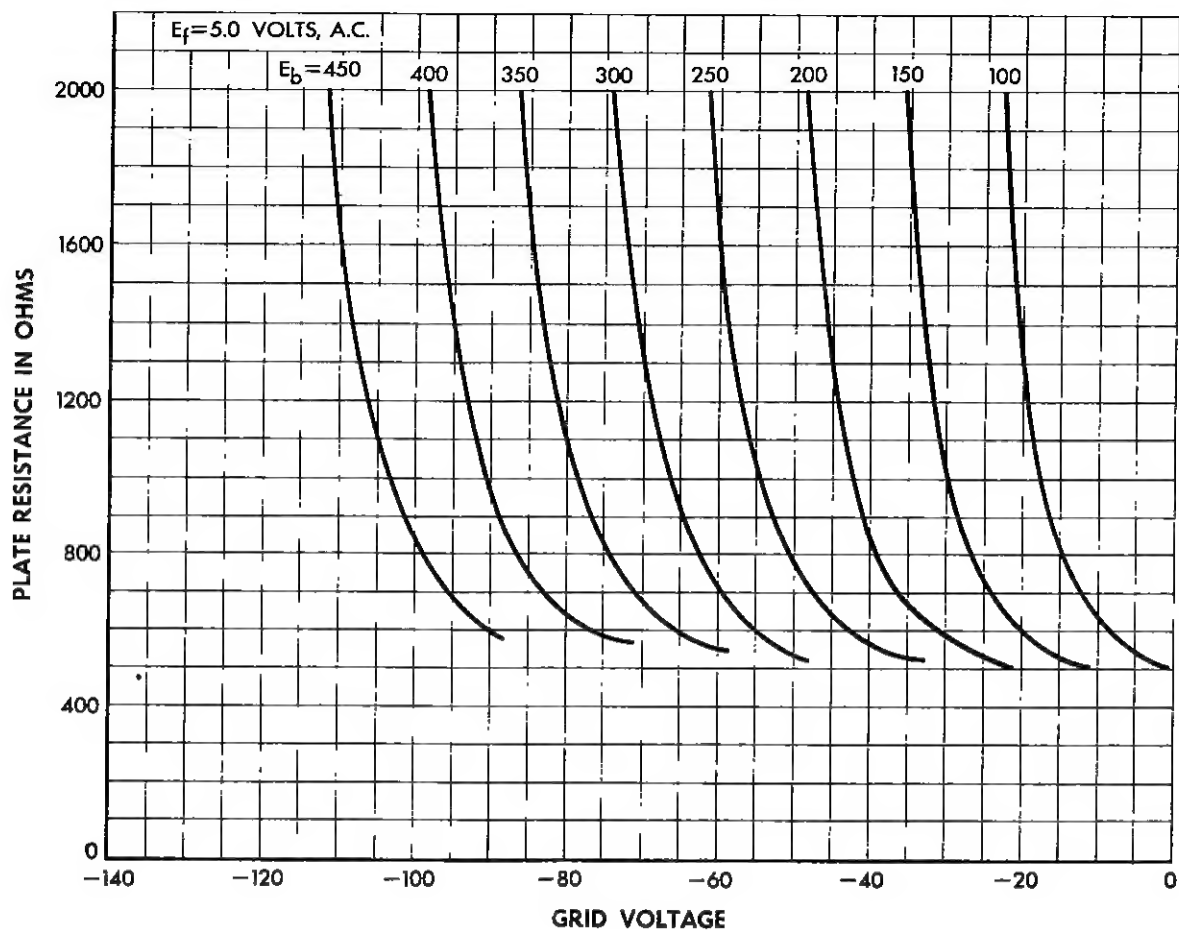
PUSH-PULL AMPLIFIER — CLASS A₁

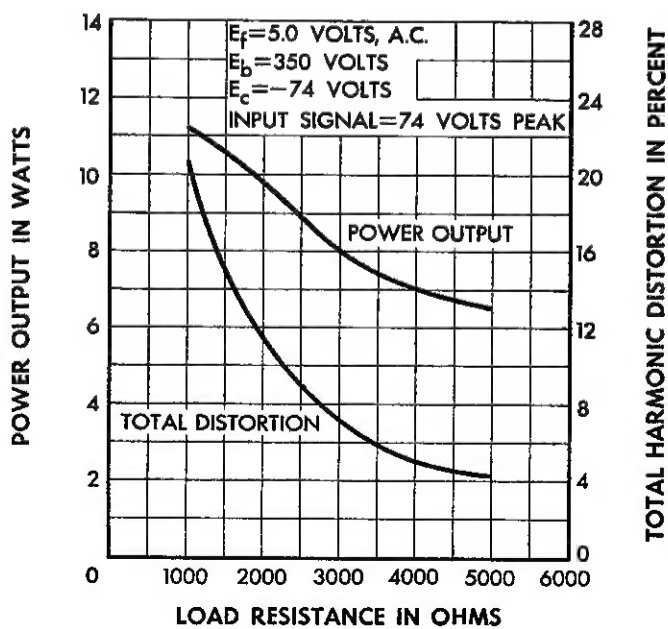
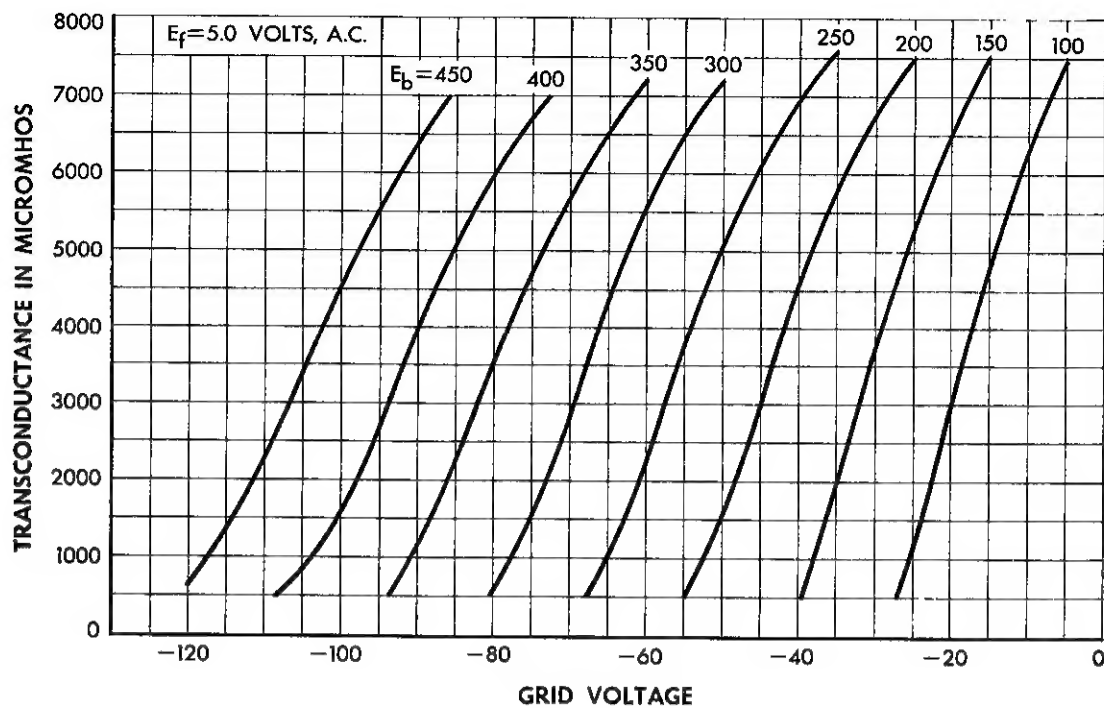
Unless otherwise specified, values are for 2 tubes

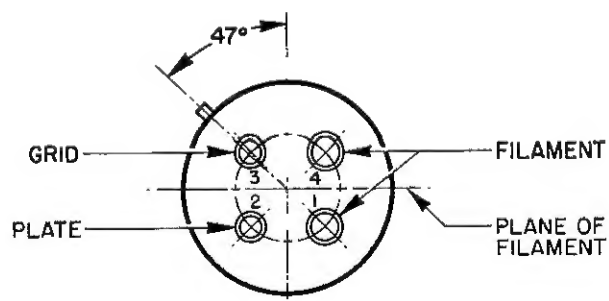
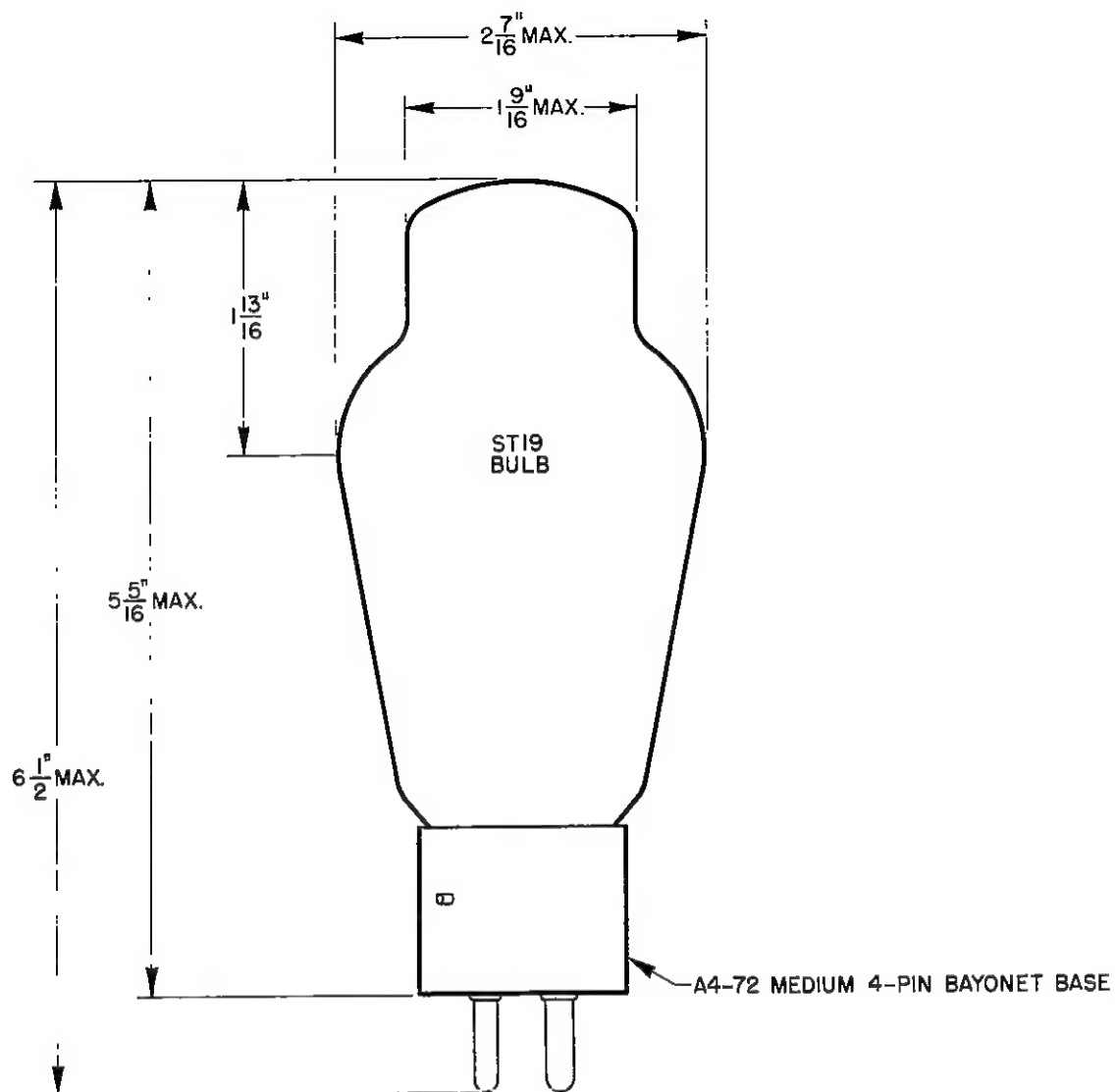
Filament Voltage, A-C	5.0	5.0 volts
Plate Voltage	300	350 volts
Grid Voltage*	-61	-67.5 volts
Peak A-F Grid-to-Grid Voltage	122	135 volts
Zero Signal Plate Current	100	170 milliamperes
Maximum Signal Plate Current	150	200 milliamperes
Effective Load Resistance (Plate-to-Plate)	4000	4000 ohms
Maximum Signal Power Output	10	20 watts
Total Harmonic Distortion	4.5	2 per cent

*If the filament is operated on D.C., the characteristics will be approximately the same if the grid voltage, measured from the negative filament, is decreased by 2.5 volts.









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A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company.